RESPONSE

Applicant has amended the claims in response to the Office Action of March 9, 2006 to correct informalities noted by the Examiner and to more clearly define the present invention. In particular, claim 14 has been amended to depend from claim 15 and thereby provide proper antecedent basis for "the oxidizing agent". Claims 8, 9, 11-15, and 17-20 have been amended to correct informal language and claims 10 and 16 have been canceled. In light of these amendments, it is respectfully submitted that the rejections of claim 14 under 35 USC 112, second paragraph, have been overcome and it is respectfully requested that such rejection be withdrawn.

The Examiner has rejected claims 8, 13, 15-16 and 18-19 under 35 USC 102(b) as being anticipated by Hwang et al. In particular, the Examiner notes several components in Hwang et al that are similar to those of the present invention. In addition, the Examiner suggests that Hwang et al suggests the method of the present claims.

These rejections are respectfully traversed and it is respectfully submitted that the present invention is patentably distinct from Hwang et al. The Examiner has mistakenly characterized the method followed in Hwang et al, stating that Hwang et al discloses

> "conveying the substrate to the first of the at least one deposition source, exposing the substrate to the at least one deposition source, conveying the substrate to the next atomic layer deposition source, and exposing the substrate to said next atomic layer deposition source."

This description of the Hwang et al method is simply wrong. Rather, in Hwang et al, it is not the substrate that is conveyed, instead, the vapor injector pipes of Hwang et al are rotatably mounted so as to rotate above the substrates being

treated. (See Hwang et al paragraphs 0044 – 0048). This is completely different from the method of the present invention wherein the substrates are conveyed past a series of fixed deposition sources.

This difference in movement is very important, particularly as the purpose of the method is to deposit a film on a plastic substrate that may come in rolls as much as 30 km in length. It would be practically unfeasible to use the Hwang invention to coat such a substrate because the processing system and gas inlet system would need to be of the same gigantic dimensions.

Therefore, it is clear that Hwang et al fails to teach or even suggest the method of the present invention and it is respectfully requested that the rejection of claims 8, 13, 15-16 and 18-19 under 35 USC 102(b) be withdrawn.

The Examiner has also rejected claims 9-10 under 35 USC 103(a) as being unpatentable over Hwang et al as applied above and further in view of Kokaku et al. The Examiner relies on Kokaku et al to teach the use of a rotatable drum that the Examiner admits is not found or suggested by Hwang et al.

These rejections are respectfully traversed and it is respectfully submitted that the present claims are patentably distinct from Hwang et al in view of Kokaku et al. Initially, it is respectfully submitted that in order to support a conclusion that a claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teaching of the references. (See Ex parte Clapp, 227 USPQ 972; PTO Bd of APP INT, 1985.) Further, applicant respectfully submits that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some

teaching, suggestion or incentive supporting the combination. (See ACS Hospital Systems, Inc. v. Montefiore Hospitals, 221 USPQ 929; Fed Cir. 1984.)

In this light, it is respectfully submitted that Hwang et al and Kokaku et al clearly fail to expressly or impliedly suggest combination. Further, the Examiner has failed to provide a convincing line of reasoning that supports the combination. In fact, the Examiner has provided no reasoning whatsoever as to why one skilled in the art would look to combine these references. Rather, it appears that the Examiner uses impermissible hindsight in coming to an unsupported conclusion that combining Hwang et al and Kokaku et al would somehow result in the present invention.

In fact, the two references are directed to very different technologies that makes the supposed combination extremely unlikely. Hwang et al is directed to ALD methods for depositing layers on semiconductor substrates, while Kokaku et al relates to plasma surface treatment of films. Nothing in Kokaku et al mentions or suggests usefulness in ALD processes and in fact could not be used in such a fashion, as it lacks basic ALD requirements, e.g. specific arrangement of the gas sources, and isolation of the treatment chambers.

Further, it is respectfully submitted that even if Hwang et al and Kokaku et al could be combined in some manner, that the result would simply not be anything close to the present invention. For example, placing a rotatable drum in the chamber of Hwang et al would require significant structural and design changes and would defeat the entire purpose of the arrangement defined by Hwang et al.

In light of the above, it is respectfully requested that the rejection of claims 9-10 under 35 USC 103(a) as being unpatentable over Hwang et al in view of Kokaku et al be withdrawn.

The Examiner has provided specific rejections of several of the current dependent claims and has provided secondary references combined with Hwang et al to support these rejections. In particular, the Examiner rejected claims 11-12 and 20 under 35 USC 103(a) as being unpatentable over Hwang et al as applied above and further in view of George et al, wherein George et al is relied on for teaching ALD formed layers of particular thickness and composition. In addition, the Examiner has rejected claim 14 under 35 USC 103(a) as being unpatentable over Hwang et al as applied above and further in view of Ahn et al, wherein Ahn et al is relied on for disclosing the use of various oxidizing gases in an ALD process. Further, the Examiner has rejected claim 17 under 35 USC 103(a) as being unpatentable over Hwang et al as applied above and further in view of Kokaku et al and George et al wherein each secondary reference is relied on for the same reasons noted above.

These rejections are respectfully traversed and it is respectfully submitted that the present invention is patentably distinct from Hwang in combination with any of the secondary references. In particular, it is clear that George et al and Ahn et al do not overcome the deficiencies of Hwang et al noted above. Further, the combination of Kokaku et al has already been discussed. Therefore, even if the references were combined as suggested by the Examiner, such combination would clearly fail to teach or suggest the present invention.

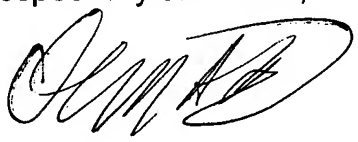
In light of the above, it is respectfully submitted that present claims 1-12 and 20 are patentably distinct from Hwang et al in combination with George et al and it is respectfully requested that the rejection of such claims under 35 USC 103(a) be withdrawn.

Further, it is respectfully submitted that present claim 14 is patentably distinct from Hwang et al in combination with Ahn et al and it is respectfully requested that the rejection of such claim under 35 USC 103(a) be withdrawn.

Finally, it is respectfully submitted that present claim 17 is patentably distinct from Hwang et al in combination with Kokaku et al and George et al and it is respectfully requested that the rejection of such claim under 35 USC 103(a) be withdrawn.

In light of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and further action consistent therewith is respectfully requested.

Respectfully submitted,



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